

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Patent Application of	)	MAIL STOP: APPEAL
Christian Almberg et al.	)	Group Art Unit: 3761
Application No.: 10/684,585	)	Examiner: Jacqueline F Stephens
Filed: October 15, 2003	)	Confirmation No.: 1749
For: BELTED ABSORBENT ARTICLE	)	

REPLY BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Examiner's Answer mailed March 2, 2009, Applicants submit the following Reply Brief pursuant to 37 C.F.R. § 41.41.

I. Overview

Applicants' Appeal Brief and corrected Supplemental Appeal Brief explained why the appealed rejections must be overturned. Among those reasons, one issue shared by all of the rejected claims is sufficient to overturn all of the rejections. The Examiner has improperly refused to give any patentable weight to a limitation that is recited in each of the rejected claims.

The Examiner's Answer has failed to present sufficient basis for maintaining the appealed rejections. The Examiner's Answer restates the alleged basis for ignoring the requirements of the claimed structure and presents additional remarks. The Examiner's position amounts to an unvarnished contention that a disclosure of no more than the bare elements of belted hygiene pants must be presumed to anticipate the novel structural requirements recited in the present claims.

The contentions of the Examiner on this issue are insufficient to establish a prima facie case of either explicit or inherent anticipation under the law and are unsupported by the evidence of record. Given their proper weight, the limitations recited in the rejected claims define structural requirements that are neither taught nor suggested by the prior art. The structural requirements shared by all the rejected claims represent a novel solution to a previously unappreciated and unexpected problem with the prior art.

Below, applicants will first address the points raised in the Examiner's Answer with respect to the structural limitations that are shared by all of the rejected claims. Furthermore, as argued in Applicants' Appeal Brief, certain claims define additional preferred features that are not taught or suggested in the prior art and that were not adequately considered by the Examiner in making the appealed rejections. The contentions of the Examiner in the Examiner's Answer, or the lack thereof, with respect to these further distinguishing features of certain claims will also be addressed in this reply.

II. Nature of the Invention

A concise reiteration of the how the invention came to be made may be helpful to provide context for the issues argued in the Appeal Brief and Examiner's Answer. The events and considerations that led to the invention have been previously set forth in the Declaration of Christian Almborg under 37 C.F.R. § 1.132, filed September 11, 2006 (hereinafter "Almborg Declaration"), and in the Specification.

Belted absorbent articles had been proposed prior to the present invention, including belted pants products having two belt halves attached to a rear portion of an absorbent chassis so that the belt halves could be pulled around the waist and joined together in the front of the wearer. See SPECIFICATION at ¶ [0005]-[0006]. In early 2000, SCA Hygiene Products provided trial samples of such a belted hygiene pants product to two nursing homes to evaluate the performance of the product in real-life conditions. ALMBERG DECLARATION at ¶ 3. The company learned that the belt halves of the trial samples were occasionally coming detached from the rear panel of the garment. See *Id.*

While investigating the performance of the trial samples, Christian Almborg and Lucas Bäck found that the belt halves of the trial product seemed to be adequately attached to the garment chassis. See ALMBERG DECLARATION at ¶ 4. However, despite seeming to be adequately attached, the inventors discovered that the joints attaching the belt halves to the garment tended to fail at relatively low forces if tension was applied at increasing angles relative to the transverse axis of the garment, i.e an axis along a horizontal waistline that is perpendicular to the longitudinal axis of the garment. *Id.* The inventors found that there existed a surprising and unexpected relationship between the angle at which a given force was applied and the time it took for a belt half to become detached. See ALMBERG DECLARATION at ¶ 6.

As noted in the Almborg Declaration and explained in the Specification, the inventors found that on users of different sizes the belts assume different angles with respect to the transverse axis of the absorbent chassis. See ALMBERG DECLARATION at ¶ 5; SPECIFICATION

at ¶ [0008]. Thus, the inventors came to understand the surprising and previously unappreciated cause of the problems experienced by some users of the trial products. The problem is not the strength of the joints per se, but rather that the structure of the joints must provide certain minimum strength as a function of the angle of tension with respect to the transverse axis. This requirement may be expressed as minimum holding times under a certain stress as a function of the angle of the stress.

The inventors discovered that to overcome the problems experienced with the trial samples, the structure of the joint between the belt half and the absorbent garment chassis must be made such that the joint would withstand a particular force at particular angles for certain minimum periods. See ALMBERG DECLARATION at ¶ 6. The minimum structural requirement discovered by the inventors is a joint structured such that when each belt half is subjected to a tension force of 35 N (about 7.8 pounds) acting along the longitudinal axis of the belt, and the longitudinal axis of the belt makes an angle (α) with respect to the transverse axis of absorbent structure of the garment, the following minimum average release times (t) are attained: when $\alpha = 10^\circ$; $t \geq 720$ seconds; when $\alpha = 20^\circ$; $t \geq 330$ seconds; when $\alpha = 25^\circ$; $t \geq 240$ seconds; when $\alpha = 30^\circ$; $t \geq 180$ seconds; when $\alpha = 40^\circ$; $t \geq 75$ seconds. See ALMBERG DECLARATION at ¶ 7. This functional constraint on the joint structure is recited in each of the independent claims. Additional preferred functional profiles with increased release times as a function of α are also described in the Specification and recited in dependent claims. See SPECIFICATION at ¶¶ [0012]-[0015].

The relationship between release times and belt tension angles that was discovered by the inventors and the resulting structural requirements incorporated into the claimed products provides for the ability to manufacture a disposable belted garment that will accommodate the wide variety of user shapes using a minimum of material and that will not fail under normal use. SPECIFICATION at ¶¶ [0007]-[0010].

III. Argument

A. The Examiner's Answer Fails To Refute Applicants Argument That Ames Does Not Teach Or Suggest Every Element of the Rejected Claims

In the Examiner's Answer, the Examiner reiterates that claims 1-6 and 12-27 have been rejected under 35 U.S.C. §§ 102(b) as allegedly unpatentable over United States Statutory Invention Registration H1674 (hereinafter "Ames"). The Examiner asserts that "Ames discloses a belted absorbent article comprising a topsheet 24, a backsheet 26 joined to the top sheet; an absorbent core 28 positions between the topsheet and the backsheet; and a pair of opposed belt halves 62 and 64 (col. 16, lines 50-54)." The Examiner has acknowledged that Ames does not teach the functional requirements recited in the rejected claims. The Examiner nevertheless asserts that "Ames teaches the present invention substantially as claimed except Ames does not teach the claimed release times."

EXAMINER'S ANSWER at 4.

Applicants submit that Ames failed to disclose the present invention substantially as claimed because, *inter alia*, Ames fails to teach or even suggest the functional structure requirements of the joint connecting the belt halves to the absorbent structure that are recited in the claims. Each of the rejected claims recites the requirement that these joints have a structure that attains a set of minimum average release times as a function of an angle α formed between a force applied along the longitudinal axis of the belt and the transverse axis of the absorbent chassis of the garment. Ames does not disclose any appreciation of the need for belt attachment joint structures that provide minimum joint structure strength as a function of an angle of tension relative to the transverse axis of the garment.

At page 4 of the Examiner's Answer, the Examiner contends that the release times recited in the claims are directed to an intended use. Applicants submit that the Examiner has misconstrued the claims, and misapplied the law. The recited release times as a

function of α are not directed to the manner in which the garment is intended to be used.

The recited limitations are directed to minimum structural requirements of the joint as manufactured. Thus, the Examiner's contentions are inapposite.

The Examiner explains the supposed relevance of the "intended use" contention, asserting "intended use must result in a structural difference between the claimed invention and the prior art." As authority, the Examiner cites *In re Casey*, 370 F2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). EXAMINER'S ANSWER at 4-5. These case citations are likewise inapposite. *In re Casey* concerned the question of whether the intended use as a tape dispenser of an otherwise old device was a patentable distinction. *In re Otto* concerned whether the intended use in a particular method of curling hair of an otherwise old device was a patentable distinction. Neither the holding in *In re Casey* nor *In re Otto* is relevant to the instant limitations. The limitations of the present claims are not directed to how the garment is to be used but rather are directed to the structural attributes of the garment as manufactured. Therefore, the Examiner's contention and supposed legal basis in this regard is simply not applicable to the present claims.

The decision in *In re Casey* is distinguished by the C.C.P.A. in that opinion from a previous decision in *In re Attwood*, 354 F.2d 365, 148 USPQ 203 (C.C.P.A. 1966) in a way that is instructive for this case. In *Casey*, the limitation in question was purely a recitation that related to the intended use of the apparatus. By contrast, in *Attwood*, the recitation of function in the preamble and in the last paragraph of the claim did relate to a patentable structure when the claims were read as a whole.¹ *In re Attwood*, 148 USPQ at 210-11 ("We have here a combination claim and the limitations ignored by the board as use limitations we

¹ 48. In an elongated unitary load-supporting metal frame member **for an adjustable metal framing construction**, said frame member having one or more flat sides, a plurality of spaced removable knock-outs provided in at least one of said sides and forming a hole therein when removed, each of said knock-outs being completely severed from said member for at least a major portion of the common periphery of the knock-out and the associated hole, said knock-out being substantially coplanar with said side and the edge of said knock-out closely contacting the side of said hole whereby said frame member presents a substantially smooth surface and each said knock-out when retained contributes to the strength and rigidity of the frame member, said knock-outs when removed providing optional holes **for the attachment of additional frame members to said frame member**.

think are functional expressions which must be given weight.”). Thus, it is clear that even use limitations must be given appropriate weight where the limitations relate to the structure of the article in the claim read as a whole. Here, the limitations at issue clearly relate to structural attributes of the claimed article.

Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. *See, e.g., Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Company et al.*, 730 F2d 1452, 221 USPQ 481 (Fed. Cir. 1984). Structural elements may be defined in claims by the functional attributes they must possess. *See In re Venezia*, 530 F2d 956, 189 USPQ 149 (C.C.P.A. 1976)(“We see nothing wrong in defining the structures of the components . . . in terms of the interrelationship of the components, or the attributes they must possess, in the completed assembly.”). Anticipation must be considered in light of the claims as a whole, including functional limitations. *See Pac-Tec Inc. v. Amerace Corp.*, 14 USPQ2d 1871, 1876 (Fed. Cir. 1990). It is clearly improper to re-write the claims -- as the Examiner has done in construing the present claims -- so as to eliminate the recited attributes of the completed assembly. *Id.*

The functional requirements recited in the claims are directed to structural attributes of the claimed garments that are not taught or suggested in the prior art. The Examiner has acknowledged that Ames does not teach the functional structural limitations of the present claims. Therefore, Ames cannot anticipate the claimed invention. The alleged basis of the rejection is improper and the rejection should be overturned.

B. The Examiner’s Contentions Of Inherent Anticipation In The Examiner’s Answer Are Not Sufficient To Support The Rejection Or To Shift The Burden Of Proof

The Examiner has attempted to justify the rejection with contentions of inherency that are insufficient under the law and unsupported by facts. Furthermore, the Examiner has

improperly attempted to shift the burden of showing that the invention is not anticipated to

Applicants without providing sufficient basis for doing so.

At page 5 of the Examiner's Answer, the Examiner has contended that

[T]he reference has met the structural requirements of the claims where pages 8-9, paragraph 0036 and page 11, paragraphs 0040 of the specification sets forth materials and structure for forming the belt halves and attaching the belt halves to the absorbent structure. Ames teaches similar materials and structure for the belt halves (col. 16, line 41 through col. 18, line 21).

Based solely on this comparison, the Examiner concluded:

Thus, Ames obviously includes belt halves capable of providing the claimed release times.

EXAMINER'S ANSWER at 5.

This summary conclusion exposes the insufficiency of the Examiner's alleged basis of the rejection under the law. The Examiner has alleged only that the structures disclosed by Ames "are capable of providing" the functional structural requirements recited in the claims. This allegation, even if true, is insufficient to establish inherency under the law.

"[A]nticipation by inherent disclosure is appropriate only when the reference discloses prior art that must necessarily include the unstated limitation, [or the reference] cannot inherently anticipate the claims." *Transclean Corp. v. Bridgewood Servs., Inc.*, 290 F.3d 1364, 1373, 62 USPQ2d 1865, 1869 (Fed. Cir. 2002) (emphasis in original).

The Examiner has failed to provide any basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic of Ames necessarily flows from the teachings of the prior art. Therefore the Examiner's contentions of inherent anticipation are insufficient under the law. The requirement that a property that is contended to be inherent must be a property that necessarily flows from the prior art is consistently emphasized in the relevant case law. "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999)

(emphasis added). The mere fact that a certain thing may result from a given set of circumstances is not sufficient. *Id.*

This Board has previously overturned similar rejections for this reason. *See Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) ("In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.") (emphasis in original). Inherency, may not be established by probabilities or possibilities.

At page 6 of the Examiner's Answer, the Examiner has contended that "if the prior art structure is capable of performing the intended use, then it meets the claim limitations." This contention is not supported by any factual evidence or technical reasoning. Even if the materials described by Ames might be constructed to provide a joint as recited in the present claims, such a joint is not an inherent result of the materials and methods described by Ames. There is no evidence that such a joint is the necessary result of what was described by Ames. To hold otherwise is to hold that Ames must have somehow anticipated every solution to every potential problem, even those problems that are not even hinted at in the prior art. That is clearly improper. A rejection must be based upon what is actually disclosed in the prior art, not what might be accomplished under optimal conditions. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (rejection reversed because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art)).

The Examiner has asserted that the Office cannot conduct tests on the material provided in the prior art. Examiner's Answer at 9. The Examiner has asserted that under these circumstances, the burden shifts to the Applicant. EXAMINER'S ANSWER at 5. However, this Board has held that such an assertion by itself is not a sufficient basis for making and maintaining a rejection absent sufficient basis to establish a prima facie case. *See Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). The initial burden

of establishing a prima facie basis sufficient under the law to deny patentability to a claimed invention still rests upon the Examiner. *Id.* (citing *In re Piasecki*, 745 F.2d 1468, 223 USPQ 785 (Fed. Cir. 1984)).

At pages 7-8 of the Examiner's Answer, the Examiner has asserted that "the Examiner has provided technical reasoning which supports the position of inherency." The Examiner's asserted "technical reasoning" is merely an allegation that "Ames does in fact cite structure and materials similar to the claimed invention." The Examiner cites teachings of Ames that are purported to reflect similarities between disclosures in Ames and the structures materials of the claimed invention. The Examiner's allegation, even if true, does not provide any factual or technical basis for holding that the materials and methods of Ames must necessarily result in the functional properties of the structure that are recited in the present claims. The Examiner has provided no basis to refute the plain truth that similar materials may be assembled so as to provide a wide range of attributes.

At page 8 of the Examiner's Answer, the Examiner declines to comment on Applicants citation of *Ex parte Leak*, Appeal No. 2000-0921 (Bd. Pat. App. & Inter. 2000) in the Appeal Brief. However, the Examiner's citation of purported similarities of materials and methods amount to no more than the sort of contentions that were previously deemed inadequate by this Board in that case. *Ex parte Leak*, Appeal No. 2000-0921 at 7 ("[T]he examiner's unvarnished position to the effect that the claimed subject matter would necessarily result from using [the prior art] material simply because the [prior art] material of the reference is similar to that used by appellants in making the claimed invention cannot be sustained.") ***Consistent application of the law requires that the present rejections cannot be sustained for the same reason.***

Applicants have pointed out that Ames merely teaches that "If the belt flaps 62 and 64 are separate elements joined to the joined to the diaper 20, they can be joined by any means known in the art." APPEAL BRIEF at 6 (citing Ames at col. 17, lines 51-53). Ames did not disclose any teaching of a particular manner in which the belts are to be joined to the

diaper. Ames did not disclose any functional properties of the joint. Consequently, there is no basis to conclude that the functional structural requirements of the present claims are inherent in the disclosure of Ames unless every means of attachment known in the art necessarily produces the required structural properties. However, such cannot be the case. The conventional materials and methods encompassed by the Ames disclosure could produce very different results depending on the particulars of how the materials were joined.

To make out a prima facie case under the law of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the functional requirements of the claimed structure necessarily result from attachment by any means known in the art. See *Ex parte Levy*, 17 USPQ2d at 1464. Neither the prosecution history, nor the Examiner's Answer, provides any such basis in fact or technical reasoning.

As an alleged basis for attempting to shift the burden of proof to Applicants, the Examiner simply proclaims a lack of a "reasonable way to search for applicants claimed properties." *Examiner's Answer* at 9. That is not a basis for shifting the burden of proof to Applicants. The Examiner has not pointed to any prior art disclosure even suggesting that persons of ordinary skill in the art even appreciated the problem solved by the present invention, let alone anticipated the solution recited in the present claims.

Further at page 9 of the Examiner's Answer, the Examiner has contended that "Since Applicant has not set forth any significant structure in the claims, the Examiner must presume that a reference that meets the structural limitations that are present would inherently meet the claim properties." Applicants respond by pointing out that the claims do set forth significant structure including the appropriate recitation of limitations relating to functional attributes, in addition to stating that the belt halves are made of a nonwoven material. See *In re Venezia*, 530 F2d 956, 189 USPQ 149 (C.C.P.A. 1976). And again, the Examiner's unvarnished contention is precisely the position that has been determined to be

unsustainable by this Board in previous decisions. *See Ex parte Levy*, 17 USPQ2d at 1464; *Ex parte Leak*, Appeal No. 2000-0921 at 7.

In the absence of a sufficient basis in fact and/or technical reasoning to reasonably support a rejection under the law of inherency, the Examiner has not established a prima facie basis a determination of inherent anticipation. Without such a basis, shifting the burden of proof to Applicants is improper and the rejection cannot be maintained.

C. Any Presumption of Inherency Has Been Rebutted By the Evidence

Even if it were proper to shift the burden of proof to the Applicants, any presumption of inherency has been rebutted by the Almberg Declaration. The history leading to the invention set forth in the Almberg Declaration proves that prior to the present invention, persons of at least ordinary skill in the art who were manufacturing belted hygiene pants in accordance with the state of the art at the time would not necessarily have made a garment meeting all of the requirements of the present claims.

Prior to the present invention, belted hygiene pants were manufactured by SCA Hygiene Products, AB as a new product. Ames merely teaches that "If the belt flaps 62 and 64 are separate elements joined to the joined to the diaper 20, they can be joined by any means known in the art." Ames at col. 17, lines 51-53. Therefore, any means used by SCA would fall within the teachings of Ames.

SCA Hygiene Products, AB provided samples of the new product to two nursing homes to assess their performance under real-life conditions. ALMBERG DECLARATION at ¶ 3. The company learned that the belt halves of the samples were coming detached from the rear panel of the garment. *See Id.* However, upon investigation, the belt halves of the trial product seemed to be adequately attached to the garment chassis. *See ALMBERG DECLARATION* at ¶ 4. To solve the problem, the inventors discovered that for reasons that were not previously appreciated, the garments should be manufactured so that the joints

connecting the belt halves to the absorbent chassis have certain attributes that were not met by the prior products. See ALMBERG DECLARATION at ¶ 5-7.

Thus, the AlMBERG Declaration proves that belted hygiene pants could be, and were, manufactured by persons of at least ordinary skill in the art with belt halves that attached such that they would seem to be adequately secured, yet the joints that attached the belt halves to the absorbent chassis in the test products did not satisfy the functional structural requirements that are recited in the present claims. It is reasonable to assume that the Ames belts would similarly seem to be adequately secured, yet the joints that attached the belt halves to the absorbent chassis would not satisfy the functional structural requirements that are recited in the present claims.

The evidence of record proves that prior art disclosures of a belted garment such as represented by Ames would not necessarily have resulted in a structure having the properties recited in the present claims. It was only by the insight of the inventors understanding the unexpected cause of the problems that were observed that the discovery that led to the present invention was made. Consequently, the functional structural requirements recited in the claims cannot have been an inherent property of the prior art. See *Continental Can Co. USA Inc. v. Monsanto Co.*, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991).

The Examiner's contention that the prior art must be presumed to meet the functional structural requirements recited in the claims is not consistent with the evidence of record in the application. Any possible presumption of inherency has been rebutted by the AlMBERG Declaration. Thus, even if every allegation of the Examiner is given credit, the rejection cannot stand.

D. The Examiner's Answer Fails To Refute Applicants Argument That The Functional Structure Requirements Of The Claims Would Not Have Been Obvious

At page 4 of the Examiner's Answer, the Examiner reiterates that claims 1-6 and 12-27 are alternatively rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Ames. However, the Examiner's Answer fails to explain why the rejection under 35 U.S.C. § 103(a) was made or why it should be maintained. *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness"). The only response to Applicants arguments at pages 13-15 of the Supplemental Appeal Brief that the Examiner gives for maintaining the allegation of obviousness, is that "Applicant failed to show a valid side-by-side comparison between their product and the product disclosed by Ames."

Again, Applicants submit that the Examiner has improperly attempted to shift the burden of proof. In rejecting claims under 35 U.S.C. § 103, the Examiner bears the burden of presenting a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The Examiner's Answer does not present any basis for a prima facie case of obviousness. Moreover, even if a prima facie case existed, a side-by-side comparison with the prior art is not required to prove that the invention is directed to a surprising improvement.

On pages 7 and 13-15 of the Supplemental Appeal Brief, Applicants explained how the surprising and unexpected discovery that underlies the invention demonstrated the non-obviousness of the invention as evidenced by the Specification and the Almberg Declaration. At page 9 of the Examiner's Answer, the Examiner appears to have misapprehended the significance of the Almberg Declaration. The Examiner has apparently read the Declaration as if it were directed to "unexpected results" and improperly dismisses the declaration as failing to show "unexpected results" in a side-by-side comparison. The Almberg Declaration,

however, is directed to explaining the discovery of the surprising and unexpected nature of the problem that is solved by the present invention.

The Almborg Declaration is evidence that the invention sprang from a surprising discovery and thus comprises a surprising solution to a previously unappreciated problem. While investigating the performance of belted hygiene pants made according to the state of the art prior to the present invention, the inventors discovered that despite seeming to be adequately attached, the joints attaching the belt halves to the garment tended to fail at relatively low forces if tension was applied at increasing angles relative to the transverse axis of the garment, i.e an axis along a horizontal waistline that is perpendicular to the longitudinal axis of the garment. See ALMBERG DECLARATION at ¶ 4. The inventors found that there existed a surprising and unexpected relationship between the angle at which a given force was applied and the time it took for a belt half to become detached. See ALMBERG DECLARATION at ¶ 6.

The Almborg Declaration shows that prior to the present invention, the nature of the problem and the solution recited in the present claims were not known to persons of ordinary skill in the art. Even if the problem of failing belts was inherent in the prior art, the cause of the problem was not known and therefore, the solution could not have been obvious. "That which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown." *In re Rijckaert*, 9 F3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993)(citing *In re Spormann*, 363 F.2d 444, 448, 150 USPQ 449, 452 (CCPA 1966)).

Because the nature of the problem was not previously appreciated, the solution provided by the present invention and recited in the claims cannot have been obvious. Case law on this point is extensive and quite emphatic.

[T]o say that the missing [element] comes from the nature of the problem to be solved begs the question because the Board has failed to show that this problem had been previously identified anywhere in the prior art.

In re Zurko, 42 USPQ2d 1476, 1479 (Fed. Cir. 1997));

[A] patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified.

In re Sponnable , 405 F.2d 578, 585, 160 USPQ 237, 243 (CCPA 1969)

[A] person having the references before him who was not cognizant of appellant's disclosure would not be informed that the problems solved by appellant ever existed. Therefore, can it be said that these references which never recognized appellant's problem would have suggested its solution? We think not . . .

In re Shaffer, 229 F.2d 476, 480, 108 USPQ 326, 329 (CCPA 1956).

We have held in the past that the discovery of a problem calling for an improvement is often a very essential element in an invention correcting such a problem. *In re Bisley*, 39 C.C.P.A. (Patents) 982, 197 F.2d 355, 94 USPQ 80 ; *In re Hamilton*, 20 C.C.P.A. (Patents) 987, 64 F.2d 141, 17 USPQ 245; *In re Krodel et al.*, 42 C.C.P.A. (Patents) 993, 223 F.2d 285, 106 USPQ 195 . Therefore, since the cited prior art does not appear to have been cognizant of the problem . . . , it can hardly be said that the references would have suggested [the solution].

In re Gruskin, 234 F.2d 493, 110 USPQ 288 (C.C.P.A. 1956)

The discovery of defects in the prior art is often a very essential element in an invention correcting such defects. *Eibel Process Company v. Minnesota & Ontario Paper Company*, 261 U. S. 45. When the defect is realized, it may be a very simple matter to utilize old elements to remedy it, but when a new and useful result is accrued, invention is not negated by the fact that the elements employed are separately old.

In re Application of John R. Hamilton, 17 USPQ 245 (C.C.P.A. 1933).

The Almberg Declaration provides evidence that the nature of the problem that was addressed by the present invention was surprising and unexpected. The Examiner has not pointed to any teaching in the prior art that would have suggested that the nature of the problem was previously understood. Where the prior art is not aware of the nature of a problem solved by an invention, that invention cannot have been suggested by the prior art. In the absence of any teaching or suggestion of either the solution recited in the present claims or the nature of the problem that is solved, there can be no prima facie basis for modifying the prior art. Therefore, the rejection should be overturned.

E. Claims 6, 12, 19, 20-24 and 27 Recite Combinations Comprising Further Features That Are Neither Anticipated Nor Obvious At The Time The Invention Was Made

On pages 8-12 of the Supplemental Appeal Brief, Applicants explained that while claims 6, 12, 19, 20-24 and 27 are all patentable for the reasons set forth above, these claims recite further features that would not have been obvious. At page 6 of the Examiner's Answer, the Examiner has cited portions of Ames "as to" claims 6, 12, 14, 15, 16, 17 and 18 without further explanation. At page 8 of the Examiner's Answer, the Examiner has addressed minimal conclusory remarks to claims 20, 21, 23 and 27. The Examiner has continued to ignore the features recited in claims 19 and 24.

As Applicants have pointed out in the Appeal Brief, claims 6, 12, 19, 20-24 and 27 each recite further combinations of features for which the Examiner has not adequately stated a prima facie case of anticipation or obviousness. Consequently the rejections of these claims must be overturned.

1. Claims 6 and 12-13 Recites Structure That Has Been Ignored By The Examiner

Claim 6 requires that each belt half is attached to said absorbent structure at said rear end region between said topsheet and said backsheet. At page 6 of the Examiner's Answer, the Examiner cites Ames col. 16, lines 50-54 "as to claim 6." However, the cited passage of Ames does not suggest attaching a belt half between a top sheet and a bottom sheet. The cited passage describes how the two belt flaps are joined at the front waist portion to form a belt.

Claim 12 recites that each of said belt halves comprises a film/nonwoven laminate. Claim 13 recites that each of said belt halves consists of nonwoven material. At page 6 of the Examiner's Answer, the Examiner cites Ames col. 18, lines 10-21 "as to claims 12 and 13." At page 8, the Examiner alleges that claim 12 is taught at col. 17, lines 60-64. The cited portion of column 17 describes a laminate comprising a rubber foam, not a film. The cited

portion of column 16 describes many different configurations, but does not mention a film/nonwoven laminate.

2. Claims 20-21 Recite “Means For Joining” That Have Not Been Properly Construed By The Examiner

With respect to claims 20-21 Applicants pointed out that claims recite combinations of features that are not taught by Ames. For example, claims 20-21 recite that the joints between the belt halves and the absorbent structure comprise “means for joining.”

At page 8 of the Examiner’s Answer, the Examiner asserts that Ames teaches “means for joining” at col. 17, lines 50-57. However, the cited portion of Ames merely states that any means known in the art may be used to join the belt flaps to the diaper. Thus, the Examiner has improperly construed the “means for joining” in the claims with “any means known in the art.” However, the plain and unambiguous meaning of 35 U.S.C. § 112, ¶ 6, is that one construing means-plus-function language in a claim must look to the specification and interpret that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure. *In re Donaldson Co. Inc.*, 16 F3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994). In making and maintaining the rejection, the Examiner has improperly ignored the structure, material, and acts described in the specification. 35 U.S.C. § 112, ¶ 6 applies regardless of the context in which the interpretation of means-plus-function language arises, including as part of a patentability determination in the PTO. *Id.*

The Specification provides detailed description of an exemplary joint structure (50) that that performs the recited function. This exemplary joint structure is described in paragraphs [0067] through [0098] as numbered in the application as published (paragraphs [0040] to [0046] as numbered in the application as filed) which refer specifically to Fig. 3 wherein the joint of reference numeral 50 and its components are most clearly illustrated.

35 U.S.C. § 112, ¶ 6 places constraints on the PTO and limits the “broadest reasonable interpretation” that the Examiner may apply to the claims. *See Id.* The Examiner

has not properly construed claims 20-21 within those constraints. When properly construed, Ames does not teach or suggest the “means for joining” that is recited in claims 20 and 21. See e.g., *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 934, 4 USPQ2d 1737, 1739 (Fed. Cir. 1987) (in banc) (“To determine whether a claim limitation is met literally where expressed as a means for performing a stated function, the court must compare the accused structure with the disclosed structure, and must find equivalent structure as well as identity of claimed function for that structure.”), see also *McGinley v. Franklin Sports Inc.*, 60 USPQ2d 1001, 1016 (Fed. Cir. 2001)(Michel J., dissenting)(“Of course, in the context of a means-plus-function claim, the invalidating prior art must disclose not simply a means for achieving the desired function, but rather the *particular structure* recited in the written description corresponding to that function, or an equivalent thereof.”) The Examiner’s Answer does not cure the defects in the Examiner’s rejection that were pointed out in the Appeal Brief. Therefore, the rejection must be overturned.

3. Claims 22 and 23 Recite Structures That The Examiner Has Not Pointed Out In The Prior Art

Claim 22 recites that each of the belt halves is attached to the absorbent structure between the topsheet and the backsheet with the respective joints each comprising at least one region of bonding between each belt half and said topsheet, and each of the joints is spaced from the longitudinal edge associated with the respective belt half.

Claim 23 depends from claim 1 and recites that each of the belt halves is attached to the absorbent structure between the topsheet and the backsheet, and each of the joints includes a region of attachment between the respective belt half and the backsheet and a region of attachment between the respective belt half and the topsheet

Claim 24 recites that in the article of claim 23, the region of attachment between the respective belt half and the backsheet includes first and second spaced substantially parallel lines of attachment between each respective belt half and said backsheet.

The Appeal Brief pointed out that the Examiner has failed to adequately point out where Ames is purported to have disclosed or even suggested the features recited in claims 22-24. A “paper” faxed by the SPE of the Examiner contained statements that, to the extent it could be understood, was clearly insufficient to justify the rejection of these claims. The Examiner’s Answer does not point out where the features of claims 22-24 are purportedly found in Ames. Consequently, the alleged basis of rejections remain unsupported by any sufficient explanation by the Examiner. Therefore, the rejections must be overturned.

4. Claim 27 Recites “Means for Counteracting the Shear Force” That Have Not Been Properly Construed By The Examiner

Claim 27 recites “comprising means for counteracting the shear force which arises between each said belt half and the absorbent structure when each belt half is subjected to a tension force at an angle α to the transverse axis.” At page 8 of the Examiner’s Answer, the Examiner has improperly construed this feature so unreasonably as to effectively read it out of the claim. In accordance with 35 U.S.C. § 112, ¶ 6, the claim must be construed in accordance with the corresponding structure, material, and acts described in the specification, and equivalents thereof. *See In re Donaldson Co. Inc.*, 16 F3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994). “The specification must be read as a whole to determine the structure capable of performing the claimed function.” *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1379 58 USPQ2d 1801, 1808 (Fed. Cir. 2001).

The shear force that is referred to in the claim is the force that is applied as the angle α between the longitudinal axis of the belt and the transverse axis of the absorbent chassis is increased. See SPECIFICATION at ¶ [0011] as published (¶ [0008] in the application as filed). The Specification provides detailed description of an exemplary joint structure (50) including features that that perform the recited function. This exemplary joint structure is described in paragraphs [0067] through [0098] as numbered in the application as published

(paragraphs [0040] to [0046] as numbered in the application as filed) which refer specifically to Fig. 3 wherein the joint of reference numeral 50 and its components are clearly illustrated.

Particularly, one of ordinary skill would understand that as illustrated in Fig. 3, the spaced substantially parallel lines of attachment (54) would be a means of counteracting the shear force in that the line that is most proximate to the longitudinal edge of the absorbent structure would experience the shear force directly, thereby largely protecting the second inboard line of attachment from the effects of the shear force.

The Examiner has not pointed out any disclosure of Ames that corresponds to the structure disclosed in the Specification. The Examiner has not even pointed to any teaching or suggestion in Ames of any feature that is intended to perform the function of the recited feature.

The Examiner has failed to address Applicants arguments or to show how the cited reference allegedly teaches every element of these claims arranged as required by the claims. The Examiner has continued to ignore Applicant's arguments with respect to the combinations recited in claims 19 and 24. Therefore, the rejections of these claims cannot stand.

F. Claims 7 and 8 Recite Combinations Comprising Further Features That Would Not Have Been Obvious At The Time The Invention Was Made

At page 6 of the Examiner's Answer, the Examiner reiterates that claims 7 and 8 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Ames in view of U.S. Patent Application Publication No. 2003/0100878 A1 (hereinafter "Leak"). The Examiner restates the alleged basis for the rejection. However, the Examiner improperly fails to provide more than mere conclusory statements. *See In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329 (Fed. Cir. 2006). In particular, the Examiner has failed to explain how a person of ordinary skill in the art would be led to modify Ames to arrive at the structure defined in claims 7 and 8.

Claim 7 depends from claim 6, which requires that each belt half is attached to said absorbent structure at said rear end region between said topsheet and said backsheet. At page 6 of the Examiner's Answer, the Examiner cites Ames col. 16, lines 50-54 "as to claim 6." However, the cited passage of Ames does not suggest attaching a belt half between a top sheet and a bottom sheet, the cited passage describes how the two belt flaps are joined at the front waist portion to form a belt. The Examiner's Answer does not point to any part of Leak that would solve this deficiency.

Claim 7 recites the article as claimed in claim 6, wherein each of the joints between each belt half and the rear end region comprises two spaced substantially parallel lines of attachment between each said belt half and said backsheet, and claim 8 requires that the lines of attachment are adhesive lines. As further pointed out in the Appeal Brief, Leak is directed to attachment of an article on the outside surface of an article and does not teach one of ordinary skill how to attach a belt half to a garment between a top sheet and a bottom sheet. The Examiner's Answer does not answer this point either. Rather, the Examiner merely speculates that a person of ordinary skill would be motivated to use spaced apart parallel adhesive lines to increase the strength of the attachment by providing plural lines of adhesive.

The Examiner's speculation overlooks the plain fact that in manufacturing, it would never be obvious to use more material, e.g. adhesive, or undertake additional assembly steps absent an engineering necessity. The combinations recited in claims 7-8 reflect additional steps and materials utilized in a preferred embodiment of the invention to solve the problem that was first identified by the present inventors. The Examiner has not identified any reason found in the references or the general knowledge in the prior art other than the problem first disclosed in Applicant's Specification that would have led a person of ordinary skill in the art to believe it was necessary to increase the strength of attachment in the manner required by the present claims.

Therefore, the Examiner's Answer has failed to present a prima facie case of obviousness for claims 7-8 and the rejection must be overturned.

IV. Conclusion

For the foregoing reasons, each of the rejections under appeal should be overturned and such action is earnestly requested.

Respectfully submitted,

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